REMARKS

Applicants' representative thanks the Examiner for the courtesies extended during the telephonic conference on April 10, 2007, with Francis Dunn. During the conference, there was discussion of clustering and clusterization scores, including discussion of claims 7 and 8. There was also discussion regarding claim 25. Further, there was clarification that the previous restriction by the Examiner applies to claims 11-20.

Claims 1-35 are currently pending in the subject application, and claims 1-5, 7-10, and 21-35 are presently under consideration. Claims 1-4, 7-9, 21, 24, 29-32, 34, and 35 have been amended as shown on pages 2-7 of the Reply. Claims 6 and 11-20 are withdrawn. No new matter has been added.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-10 and 21-35 Under 35 U.S.C. § 102(e)

Claims 1-10 and 21-35 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Roustant, *et al.* (US 2004/0093321). It is requested that this rejection be withdrawn for at least the following reasons. Roustant, *et al.* does not disclose each and every element of the subject claims. Claim 6 is withdrawn herein and rejection of this claim is rendered moot.

> For a prior art reference to anticipate, 35 U.S.C. § 102 requires that "***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

The claimed subject matter relates to a computerized interface for retrieving, organizing, and presenting data. In accordance with one aspect of the claimed subject matter, the interface can include a property analyzer that can receive a plurality of items (*e.g.*, files, documents, folders, images, messages, *etc.*) and their associated properties (*e.g.*, type, location, date), and analyze the respective items and properties. For example,

an initial property can be selected to form a first level of clusterization. The property analyzer can then analyze various possible clustering scenarios based on each of the other properties to see which clusterization will yield desired clustering results. In accordance with an aspect of the claimed subject matter, such analysis can include automatically determining a clusterization score for each of the other properties using an algorithm, where the property receiving the highest score can yield optimized clustering results. Based upon the analysis by the property analyzer, another property can be automatically selected (*e.g.*, the property with the highest score) and an item distribution can be determined automatically based on the selected other property. Thereafter, a cluster organizer can be employed to automatically form new clusters having the desired clusterization based in part on the selected other property. The cluster organizer can then present the desired grouping of new clusters in a user interface so that such clusters can be perceived by a user, for example.

In particular, independent claim 1 (and similarly independent claims 21 and 29), as amended, recites: a property analyzer that determines an item distribution and forms a plurality of first-level clusters based in part on a first property of a plurality of properties, and ***automatically determines a respective item distribution for each other property of the plurality of properties, calculates a clusterization score for each other property based on the respective item distribution, and selects one other property having a highest clusterization score; an organizer that automatically forms a plurality of new clusters based in part on the one other property, and presents the plurality of new clusters***. Roustant, *et al.* does not disclose this distinctive feature of the claimed subject matter.

Rather, Roustant, *et al.* discloses structural contextual clustering that is used to evaluate and presents search results. (*See* p. 1, ¶ [0005]). Roustant, *et al.* discloses identifying attributes of the content of the search results to impose structure on such results and using search keywords to label search results grouped into clusters. (*See id.*) Roustant, *et al.* further discloses clustering results by defining attributes that define a main clustering strategy and a sub-clustering strategy based on wrapper specifications for extracting attributes from selected information sources. (*See* p. 3, ¶ [0027]). The clustering strategies are defined by either (a) default values of a federated search engine;

(b) preset user preferences, or (c) a combination of (a) and (b). (*See* p. 3, ¶ [0028]).

However, unlike the claimed subject matter, Roustant, *et al.* fails to disclose clustering data items according to a first property, and then, based on a clusterization score associated with item distribution, selecting another property to be used to create a new set of clusters. Instead, Roustant, *et al.* discloses merging two preliminary clusters to combine the search results from each cluster together, based on the number of search results the two preliminary clusters have in common, if a merging threshold is met. (*See* p. 3, ¶ [0060]). Roustant, *et al.* also discloses a "cluster score" that accounts for the average score of the five best search results grouped in a cluster; the merging score of the cluster; cluster size; cluster name length; and accuracy of the cluster name. (*See* p. 3, ¶ [0066]). It is important to note that this "cluster score" is determined ***after*** the clusters are formed ***and is used***, with other information, ***to rank the clusters, as already formed, by importance*** by selecting the clusters that offer the best coverage of search results. (*See* p. 3, ¶ [0067]). Roustant, *et al.* fails to disclose calculating the "cluster scores" to determine which other property to use in order to form new clusters based on such property, and selecting such property based on a highest "cluster score."

In contrast, the claimed subject matter can form a first-level clusterization based on a first property of a plurality of properties. The claimed subject matter can then calculate a clusterization score for each other property, and then ***automatically select another property*** based on the property having the highest clusterization score, for example. The highest clusterization score can indicate a desired or optimal clustering of data items such that a substantially uniform grouping of items into a moderate number of clusters is achieved. The claimed subject matter can further determine an item distribution based on this other property. Further, the claimed subject matter can ***automatically form a plurality of new clusters based in part on the other property,*** distribute the items respectively into each of the new clusters, and present the plurality of new clusters. The new clusters and items included therein can be displayed in a user interface, for example. The claimed subject matter thereby optimizes the retrieval and display of desired information by displaying the desired information in a subset of easily manageable information clusters.

Further, claim 7, as amended, additionally recites: ***the clusterization score is calculated in the following equation: clusterization score = $n\_items_{cluster1}$ * $n\_items_{cluster2}$ * …, for all clusters associated with a particular property of the plurality of properties, where n_items is the number of items associated with a respective cluster***. Roustant, *et al.* does not disclose this distinctive feature of the claimed subject matter.

Rather, Roustant, *et al.* simply discloses calculating the number of search results that two clusters have in common, and, for each cluster, if the number of common results divided by the total number of results in a cluster is greater than a threshold level, the two clusters and results therein can be merged together. (*See* p. 3, ¶ [0060]). Roustant, *et al.* also discloses a "cluster score" that is based on various factors. (*See* p. 3, ¶ [0066]). However, the "cluster score" of Roustant, *et al.* refers to a score used to rank which clusters offer the best coverage of search results. (*See* p. 3, ¶ [0067]).

Unlike the claimed subject matter, Roustant, *et al.* fails to disclose using a clusterization score to determine the ideal property to select on which to perform a clusterization for distribution of items into new clusters based on such property, and further fails to disclose calculating the clusterization score as in the claimed subject matter. Rather, the "cluster score" of Roustant, *et al.* is determined ***after*** the clusters have already been formed, and Roustant, *et al.* is silent regarding how the "cluster score" is calculated. (*See* p. 3, ¶ [0067]).

In contrast, the claimed subject matter can calculate a clusterization score for a property by multiplying together the number of items in each respective cluster associated with the property. The clusterization score can be utilized to determine the property to be selected and used in forming the new clusters with desired or optimized results. For example, choosing the property having the highest clusterization score can yield an efficient distribution of items in a moderate number of clusters.

Furthermore, claim 8, as amended, additionally recites: ***the clusterization score is calculated as follows: clusterization score = (N_total)! / ($(n\_items_{cluster1})!$ * $(n\_items_{cluster2})!$ * …), for all clusters associated with a particular property of the plurality of properties, where N_total is the total number items of all clusters and n_items is the number of items associated with a respective cluster***. Roustant, *et al.* fails to disclose such distinctive feature of the claimed subject matter.

For reasons similar to those stated, *supra*, Roustant, *et al*. fails to disclose using a clusterization score or calculating the clusterization score, as claimed.

Moreover, claim 34, as amended, additionally recites: ***the clusterization score is equal to the product of a number of items in a respective cluster multiplied by a number of items per cluster in each other respective cluster, or to a total number of items divided by the product of the factorial of a number of items in a respective cluster multiplied by the factorial of a number of items per cluster in each other respective cluster***. Roustant, *et al*. fails to disclose such distinctive functionality of the claimed subject matter.

For reasons similar to those stated, *supra*, Roustant, *et al*. fails to disclose using a clusterization score or calculating the clusterization score, as claimed.

In view of at least the foregoing, it is readily apparent that Roustant, *et al*. fails to disclose each and every element of the claimed subject matter as recited in independent claims 1, 21, and 29 (and associated dependent claims 2-10, 22-28, and 30-35). Further, claim 6 is withdrawn herein rendering rejection of this claim moot. Accordingly, the rejection should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063[MSFTP531US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & CALVIN, LLP

/Himanshu S. Amin/
Himanshu S. Amin
Reg. No. 40,894

AMIN, TUROCY & CALVIN, LLP
24TH Floor, National City Center
1900 E. 9TH Street
Cleveland, Ohio 44114
Telephone (216) 696-8730
Facsimile (216) 696-8731